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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,242	12/19/2000	Jon C. Taenzer	022577-404	4466

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EXAMINER

BARNIE, REXFORD N

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 04/23/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/739,242

Applicant(s)
TAENZER

Examiner
REXFORD BARNIE

Art Unit
2643



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 10, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13, and 15-24 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, and 15-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

RJ Barnie
REXFORD BARNIE
PRIMARY EXAMINER
04/12/03

Art Unit: 2643

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7, 8 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Taenzer (US Pat# 5,751,820).

Regarding claim 1, Taenzer teaches a hearing aid which can wirelessly communicate with a remote processor in (see figs. 1A). According to Taenzer, the hearing aid's remote processor can communicate with a cellular communication system such that an incoming cellular call can automatically be connected via a wake-up control mode in (see column 9 line 66-column 10 line 22, column 3 lines 17-22). Furthermore, Taenzer teaches being able to switch rapidly from a non-receive mode to a receive mode to allow a transceiver of the hearing aid to sample and transmit audio signals in (see column 5 lines 50-column 6 line 7). The hearing aid would perform in a first signal path namely "a first mode" equivalent to a hearing aid mode according to (see column 6 lines 8-22).

Regarding claim 2, Taenzer teaches a hearing aid mode wherein the hearing apparatus can function as a regular hearing aid with enhanced signal processing.

Art Unit: 2643

Regarding claim 3, Taenzer teaches the possibility of the hearing system communicating with a wireless terminal including a cellular system in conjunction with a mobile/cellular phone or a computer system.

Regarding claim 4, Taenzer teaches activating a second path in response to receiving an outside call. A ringing signal is generated from a central or switching office as means of alerting a called party and to make a connection, if the called party decides to go off-hook.

Regarding claim 5, Taenzer implies from his teaching in (column 9 line 66-column 10 line 22) that the hearing aid system could be in a hearing aid mode in a form of a sleep state thus conserving power supply if an incoming call signal is not detected. Furthermore, it could be inferred that the hearing aid would be in a sleep state and activated automatically in response to a hearing activation mode in response to detection of audio signals.

Regarding claim 7, Taenzer seems to imply that one can activate the hearing aid in the sleep/active mode either manually, by voice recognition or automatically in (see sleep/awake node, column 10 lines 10-11).

Regarding claim 8, Taenzer teaches in (see column 10 lines 1-22) that power can be conserved by placing the hearing aid in a sleeping mode.

Regarding claims 13 and 15, Taenzer teaches a switch which can be activated manually, automatically or by voice recognition to a sleep/wake mode in (see column 10).

Art Unit: 2643

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taenzer (US Pat# 5,751,820) in view of Topholm (US Pat# 5,202,927) or Kerns (US Pat# 6,144,748) or Anderson (US Pat# 5,721,783, cited by applicant).

Regarding claims 9-12, Taenzer teaches processing of audio signals including personal communication and that of a cellular system using digital signal processing but fails to teach a memory for storing parameters for controlling a hearing aid fitted specifically for an individual, eventhough arguably there could be one to store parameters associated with the user inorder to overcome factors such as background noise and so forth..

It's notoriously well known in the art to store hearing aid parameters in a memory for the purpose of signal processing of audio signals for an individual.

Topholm teaches a hearing aid memory means which can store hearing aid signal processing parameters in memories (5) and (6). It's could be a unitary memory as known in the art.

Kerns teaches a hearing aid with a memory (215), digital processing means and so forth for controlling the operation (see entire disclosure).

Art Unit: 2643

Anderson teaches a hearing aid with a processor with a memory structure which can be used in controlling telephone functionalities as well normal hearing aid processing in (see 948 of fig. 9, column 23 lines 26-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate either one of the secondary references into that of Taenzer thus making it possible to control hearing aid based on stored signal processing parameters suitable for a hearing aid user.

5. Claims 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taenzer (US Pat# 5,751,820) in view of Kerns (US Pat# 6,144,748) or Anderson (US Pat# 5,721,783, cited by applicant).

Regarding claims 16 and 17, Taenzer teaches a hearing aid which can wirelessly communicate with a remote processor in (see figs. 1A). According to Taenzer, the hearing aid's remote processor can communicate with a cellular communication system such that an incoming cellular call can automatically be connected via a wake-up control mode in (see column 9 line 66-column 10 line 22, column 3 lines 17-22). Furthermore, Taenzer teaches being able to switch rapidly from a non-receive mode to a receive mode to allow a transceiver of the hearing aid to sample and transmit audio signals in (see column 5 lines 50-column 6 line 7). The hearing aid would perform in a first signal path namely "a first mode" equivalent to a hearing aid mode according to (see column 6 lines 8-22). Taenzer fails to teach in detail an input/output port to which a communication device such as a cell phone or radio can be connected.

Art Unit: 2643

Anderson teaches a hearing aid apparatus wherein a radio telephone or one of a plurality of external communication devices can be connected to a remote processor using an input/output port for receiving audio signals in (see figs. And disclosure). Furthermore, Anderson teaches a hearing aid with a processor with a memory structure which can be used in controlling telephone functionalities as well normal hearing aid processing in (see 948 of fig. 9, column 23 lines 26-35).

Kerns teaches a hearing aid device in (see fig. 2) wherein external devices can be connected to a hearing aid system through an input/output port in (see col. 2 line 66-col. 3 line 2, col. 4 lines 27-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of being able to communicate with a hearing aid means through either a wired or wireless interface into that of Taenzer thus making it possible to use a hearing aid in a hearing aid mode or for other purposes including making or receiving telephone calls and enhancing sound intelligibility for a user.

Regarding claim 18, the combination including Taenezer teaches Anderson teaches being able to use manual buttons to switch from one mode to another mode namely; from a telephone mode to a hearing aid mode in (see disclosure of Anderson). Furthermore, the combination including Tanezer teaches a switching means which can place the hearing aid device in a sleep mode in addition to another mechanical switch and another means to place the hearing aid apparatus in a cellular communication mode. In summary, a manual switch can be used for

Art Unit: 2643

selectively placing the hearing device in a hearing aid mode or communication mode, automatic switching is possible and another switch possibly mechanical can place the hearing device in a sleep mode.

Regarding claim 19, The combination including Taenzer teaches activating a second path in response to receiving an outside call. A ringing signal is generated from a central or switching office as means of alerting a called party and to make a connection, if the called party decides to go off-hook.

Regarding claim 20, The combination including Taenzer implies from his teaching in (column 9 line 66-column 10 line 22) that the hearing aid system could be in a hearing aid mode in a form of a sleep state thus conserving power supply if an incoming call signal is not detected. Furthermore, it could be inferred that the hearing aid would be in a sleep state and activated automatically in response to a hearing activation mode in response to detection of audio signals such as an incoming call signal.

Regarding claim 21-23, the combination including Taenezer teaches a digital processing element which would include some parameters with which signals can be processed based in part on (see col.11 lines 15-20) but for the sake of argument, the combination including Anderson teaches a hearing aid with a processor with a memory structure which can be used in controlling telephone functionalities as well normal hearing aid processing in (see 948 of fig. 9, column 23 lines 26-35 of Anderson).

Art Unit: 2643

Regarding claim 24, see the explanation as set forth regarding claims 16-17.

Response to Arguments

6. Applicant's arguments filed on 02/10/03 have been fully considered but they are not persuasive.

The applicant argued the following arguments.

(I) The applicant argued that the prior art of record (Taenzer) fails to teach the claimed subject matter of having a hearing aid capable of functioning in two modes namely; a hearing aid mode or a communication mode (cell phone).

The examiner disagrees because Taenzer teaches a hearing system which can function in conjunction with other external devices including a telephone or computer in (see col. 5 lines 7-10, col. 8 lines 2-9 and col. 9 line 66-column 10 line 22). The hearing aid system can function in a hearing aid mode, can be receptive to receiving an incoming call, be placed in a sleep mode as means of conserving energy and so forth.

Furthermore, the applied reference Anderson teaches a hearing aid system which can be used in receiving an incoming call from a remote device except that the hearing aid might have to be operated manually in response to the received incoming call.

In summary, the explanation as set forth in the rejection of the claimed subject matter is believed to be proper and permissible based on the explanation given above.

Art Unit: 2643

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **REXFORD BARNIE** whose telephone number is (703) 306-2744. The examiner can normally be reached on Monday through Friday from 8:30 to 6:00p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to (703) 872-9314 and labeled accordingly (Please label

"PROPOSED/INFORMAL" or "FORMAL").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 306-0377.

Rexford Barnie
Patent Examiner
RB 04/12/03.

R. Barnie
REXFORD BARNIE
PRIMARY EXAMINER